

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of manufacturing an optical device, comprising:

forming a mesa structure from said substrate, said mesa structure having a cladding layer located thereover; and

isolating an end of a first layer from said cladding layer by encapsulating said end between second and third layers located adjacent said mesa structure, wherein said first layer comprises indium phosphide and said encapsulating includes forming said first layer having said isolated end in the presence phosphorous trichloride.
2. (Canceled)
3. (Original) The method as recited in claim 1 wherein said second and third layers comprise indium phosphide and said encapsulating includes forming said second and third layers in an atmosphere substantially free of phosphorous trichloride.
4. (Original) The method as recited in claim 1 wherein said isolating includes forming said first layer in the presence of a compound containing chlorine or bromine.
5. (Original) The method as recited in claim 1 wherein said second and third layers are doped with an n-type dopant.

6. (Original) The method as recited in claim 1 further including a fourth layer wherein said second layer is located between said first and fourth layers and said fourth layer is doped with a p-type dopant.

7. (Original) The method as recited in claim 1 wherein said first layer is doped with a metal capable of diffusing into said cladding layer.

Claims 8-20. (Canceled)

21. (New) A method of manufacturing an optical device, comprising:
forming a mesa structure from said substrate, said mesa structure having a cladding layer located thereover; and

isolating an end of a first layer from said cladding layer by encapsulating said end between second and third layers located adjacent said mesa structure, wherein said second and third layers comprise indium phosphide and said encapsulating includes forming said second and third layers in an atmosphere substantially free of phosphorous trichloride.

22. (New) The method as recited in claim 21 wherein said first layer comprises indium phosphide and said encapsulating includes forming said first layer having said isolated end in the presence phosphorous trichloride.

23. (New) The method as recited in claim 21 wherein said isolating includes forming said first layer in the presence of a compound containing chlorine or bromine.

24. (New) The method as recited in claim 21 wherein said second and third layers are doped with an n-type dopant.
25. (New) The method as recited in claim 21 further including a fourth layer wherein said second layer is located between said first and fourth layers and said fourth layer is doped with a p-type dopant.
26. (New) The method as recited in claim 21 wherein said first layer is doped with a metal capable of diffusing into said cladding layer.
27. (New) A method of manufacturing an optical device, comprising:
forming a mesa structure from said substrate, said mesa structure having a cladding layer located thereover; and
isolating an end of a first layer from said cladding layer by encapsulating said end between second and third layers located adjacent said mesa structure, wherein said isolating includes forming said first layer in the presence of a compound containing chlorine or bromine.
28. (New) The method as recited in claim 27 wherein said first layer comprises indium phosphide and said encapsulating includes forming said first layer having said isolated end in the presence phosphorous trichloride.

29. (New) The method as recited in claim 27 wherein said second and third layers comprise indium phosphide and said encapsulating includes forming said second and third layers in an atmosphere substantially free of phosphorous trichloride.

30. (New) The method as recited in claim 27 wherein said second and third layers are doped with an n-type dopant.

31. (New) The method as recited in claim 27 further including a fourth layer wherein said second layer is located between said first and fourth layers and said fourth layer is doped with a p-type dopant.

32. (New) The method as recited in claim 27 wherein said first layer is doped with a metal capable of diffusing into said cladding layer.